



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

1/12

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,979	10/03/2000	Alan L. Cox	60063-0112	7664
29989	7590	04/05/2006	EXAMINER	
HICKMAN PALERMO TRUONG & BECKER, LLP			DILLER, JESSE DAVID	
2055 GATEWAY PLACE			ART UNIT	PAPER NUMBER
SUITE 550				2187
SAN JOSE, CA 95110				

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/677,979	COX ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Jesse Diller	2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 February 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 47,64,77 and 90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 47,64,77 and 90 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/17/06</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Response to Amendment***

1. Examiner acknowledges receipt and entry of the after-final amendment in response to the office action dated 11/28/2005, which amendment was received 02/03/2006. At this point, claims 47, 64, 77, and 90 have been amended, claims 1-46, 48-63, 65-76, 78-89, and 91-95 have been cancelled. Thus, claims 47, 64, 77, and 90 are now pending in the application.

**NOTE:** Notwithstanding the statements in the Decision On Petition mailed 01/24/2006, the indicated allowability of claims 47, 64, 77, and 90 is withdrawn in view of the newly discovered reference(s) to Stinson. Rejections based on the newly cited reference(s) follow.

### **Claim Rejections – 35 USC § 112 and 102**

2. In response to the cancellation of claims 40-46, 48-63, 65-76, 78-89, and 91-95, the 35 USC § 103 rejections of those claim is moot, and therefore withdrawn.

### ***Information Disclosure Statement***

3. The IDS submitted 02/17/2006 has not been considered as it does not meet the requirements of 37 CFR § 1.97(d), namely the statement of 1.97(e) and appropriate fees. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 47, 64, 77, and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mantha et al., US 6,163,779 in view of Ganger et al., “Embedded Inodes and Explicit Grouping: Exploiting Disk Bandwidth for Small Files – 1997”, hereinafter Ganger, and further in view of Craig Stinson, “Running Microsoft Windows 98”, 1998 Microsoft Press, hereinafter Stinson.**

5. **As for claims 47 and 90, Mantha teaches a method and a computer program product in computer readable media for use in storing Web content, comprising:**

- receiving a Web page (displaying a base HTML document on a browser of a Web client; see abstract and summary of the invention);
- identifying Web objects having correlated retrieval times to the Web page (identifying an embedded object associated with each hypertext reference in the base HTML document; see abstract and summary of the invention);
- receiving the Web objects (receiving copies of the embedded objects from the server; see abstract and summary of the invention);

- identifying a reference to at least one of the Web objects of the Web page (identifying an embedded object associated with each hypertext reference in the base HTML document; see abstract and summary of the invention);
  - storing the Web page in a holding area (caching a Web page in a proxy cache; see figure 3: element 227, column 6: lines 40-67, column 7: lines 1-67, and column 8: lines 1-14);
  - receiving the at least one of the Web objects (retrieving a copy of the embedded object from the server; see abstract and summary of the invention);
  - storing the at least one of the Web objects in the holding area (caching a Web object in a proxy cache; see figure 3: element 227, column 6: lines 40-67, column 7: lines 1-67, and column 8: lines 1-14); wherein
    - at least one of the Web objects comprise an embedded Web page (a hypertext reference in the base HTML document; abstract and summary of the invention).
6. Mantha does not expressly disclose
- storing the Web objects, the Web page, and the at least one of the Web objects in co-located positions on a storage device.
7. **Ganger teaches** a method of storing objects having correlated retrieval times in co-located positions on a disk drive (see figure 1; page 1: Abstract; and page 3: lines 32-52 of column 1 of Ganger).
8. It would have been obvious to one having an ordinary level of skill in the art at the time the invention was made to include, in the method taught by Mantha, a step of storing the Web objects, the Web page, and the Web Objects in co-located positions on

a storage device. This would have been obvious since Ganger clearly teaches that storing objects having correlated retrieval times in co-located positions on the disk drive reduces disk access time and improves performance (see page 4: lines 53-54 of column 2; page 5: columns 1-2; page 6: lines 1-15 of column 1; and page 11: 14-22 of Ganger).

9. Ganger and Mantha also do not expressly teach:

- recursively parsing the embedded Web page to identify additional embedded Web pages; and
- storing the Web page, the embedded Web page, and the additional embedded Web pages in co-located positions on the storage device.

10. Stinson discloses a feature of Microsoft's Internet Explorer (IE), namely the "Subscription Wizard". Stinson discloses that IE allows a user to download, or cache, web pages to which the user has subscribed. Specifically, on page 628, the last 2 paragraphs, Stinson notes that IE will not only cache the requested page, but will download and cache pages which are embedded in the page via hyperlinks several levels deep. For example, if a user tells IE to cache "2 links deep", IE will follow all hyperlinks embedded on the present page, cache those pages, and follow each link on each of those embedded pages to cache a third level of pages. This has been a feature of IE in every version since version 4.01. See the illustration below.

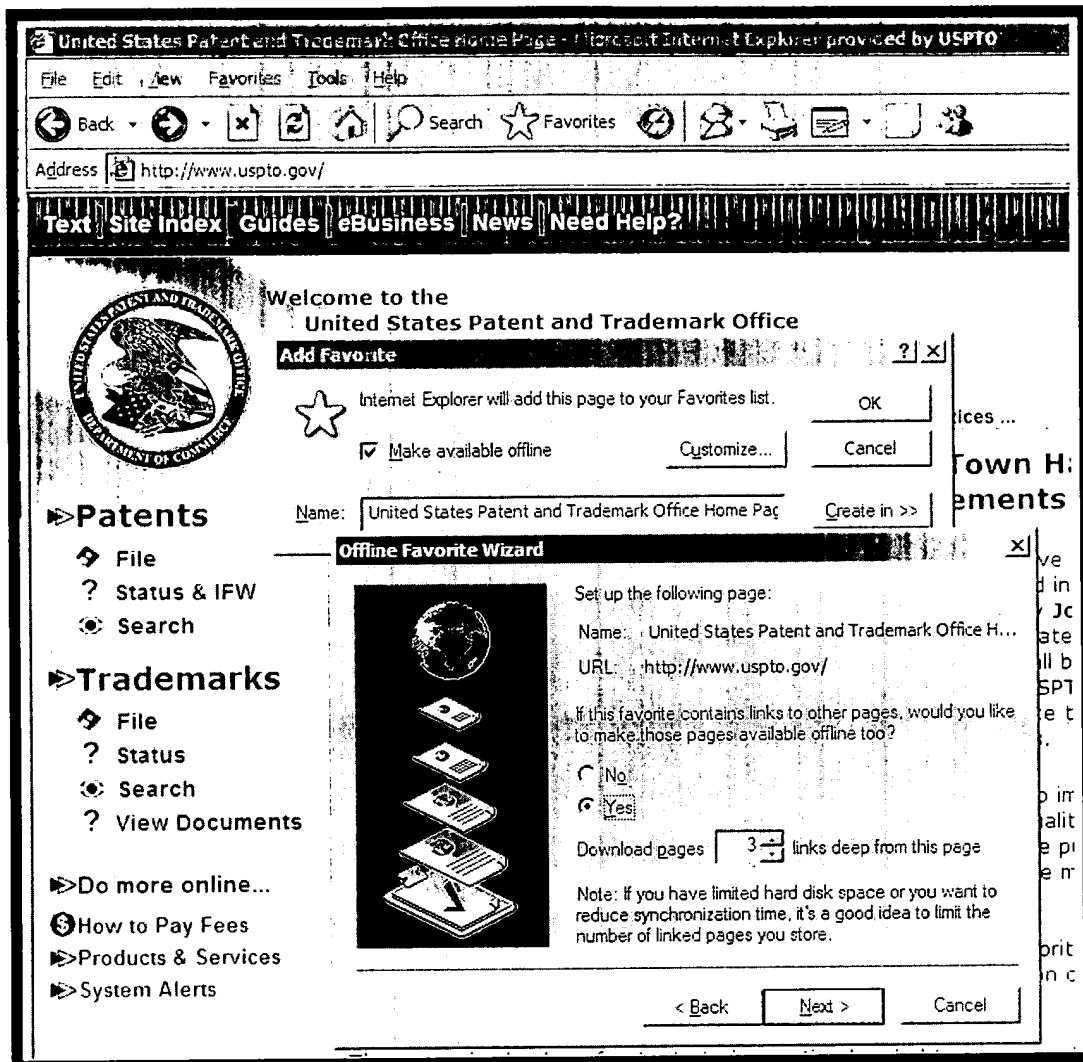


Figure 1 - Microsoft IE's embedded web page caching system

11. Stinson and the system of Mantha and Ganger are analogous art because they are from the same problem solving area, namely web caching for faster access.
12. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the system of Mantha and Ganger to include a recursive caching of embedded web pages as in Stinson.

13. The motivation for doing so is taught by Stinson on Page 625, first paragraph, namely that caching the web pages allows the user to view the content without waiting for a slow download.

14. It is noted that the claimed limitation is for recursively parsing and caching "embedded Web pages". Stinson discloses caching **hyperlinked** Web pages. It is also noted that Page 8, lines 24-30 of the instant application discuss embedding and hyper-linking as separate operations. However, during the downloading process of IE, all "embedded" objects are downloaded.

15. Also, it is noted that in the base HTML code, there is no difference between embedded and hyperlinked objects. For example, to embed a picture or other object in a web page, the actual data of the picture is not embedded in the page; the embedding is done by means of a link:

``

To insert a hyperlink to a web page, again the actual data of the linked object is not inserted, but a link is used:

`<a href="html/page2.htm">Page 2</a>`

In neither case is the actual data of the object inserted in the web page; a 'pointer' is used instead. The browser reads the links and displays the data for the image and a hyperlink for the web page.

16. However, even assuming, *arguendo*, the distinction between hyper-linking and embedding, one of ordinary skill in the art would still be motivated to combine the references. This is because, for both embedded objects and hyperlinked objects, the

reason for downloading and caching is the same. As recognized on page 625 of Stinson and by the Applicant, the caching of the objects allows for quick retrieval of the Web objects. A person of ordinary skill in the art, having seen IE's capability for recursively caching hyperlinked web pages, would be motivated for the same reason to recursively cache embedded web pages. Both hyperlinked and embedded web pages take time to load; caching them will decrease the wait time and increase the responsiveness of the system.

17. Therefore, it would have been obvious to combine Stinson with the system of Mantha and Ganger, for the benefit of increased responsiveness and lower latency, to obtain the invention as specified in claims 47 and 90.

18. **As for claim 64, Mantha teaches** a method for storing Web content, comprising:

- receiving a plurality of Web objects (parsing the base Web page and retrieving a list of hypertext references or copies of the embedded objects; see column 1: lines 29-40, abstract and summary of the invention);
- identifying at least one of the plurality of Web objects as a Web page (a hypertext reference in the base HTML document; see abstract and summary of the invention);
- identifying at least one of the plurality of Web objects as a correlated Web object having a correlated retrieval time to the Web page (identifying an embedded object associated with each hypertext reference in the base HTML document; see abstract and summary of the invention);

- at least one of the Web objects comprise an embedded Web page (a hypertext reference in the base HTML document; see abstract and summary of the invention).
19. However, Mantha does not clearly teach a step of
- storing the Web page and the correlated Web objects in co-located positions on a storage device.
20. **Ganger teaches** a method of storing objects having correlated retrieval times in co-located positions on a disk drive (see figure 1; page 1: Abstract; and page 3: lines 32-52 of column 1 of Ganger).
21. It would have been obvious to one having an ordinary level of skill in the art at the time the invention was made to include, in the method taught by Mantha, a step of storing the Web objects, the Web page, and the Web Objects in co-located positions on a storage device. This would have been obvious since Ganger clearly teaches that storing objects having correlated retrieval times in co-located positions on the disk drive reduces disk access time and improves performance (see page 4: lines 53-54 of column 2; page 5: columns 1-2; page 6: lines 1-15 of column 1; and page 11: 14-22 of Ganger).
22. **Ganger and Mantha also do not expressly teach:**
- recursively parsing the embedded Web page to identify additional embedded Web pages; and
  - storing the Web page, the embedded Web page, and the additional embedded Web pages in co-located positions on the storage device.

23. Stinson discloses a feature of Microsoft's Internet Explorer (IE), namely the "Subscription Wizard". Stinson discloses that IE allows a user to download, or cache, web pages to which the user has subscribed. Specifically, on page 628, the last 2 paragraphs, Stinson notes that IE will not only cache the requested page, but will download and cache pages which are embedded in the page via hyperlinks several levels deep. For example, if a user tells IE to cache "2 links deep", IE will follow all hyperlinks embedded on the present page, cache those pages, and follow each link on each of those embedded pages to cache a third level of pages. This has been a feature of IE in every version since version 4.01. See the illustration below.

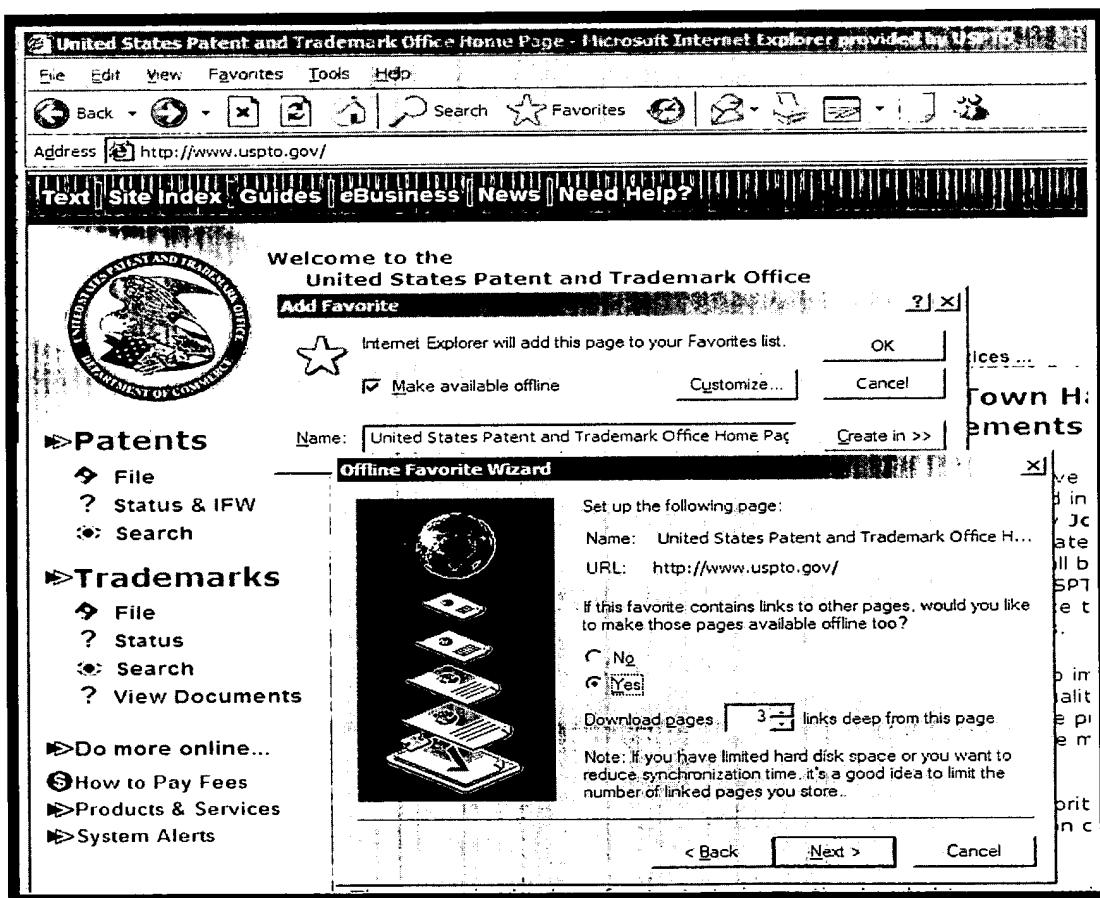


Figure 2 - Microsoft IE's embedded web page caching system

24. Stinson and the system of Mantha and Ganger are analogous art because they are from the same problem solving area, namely web caching for faster access.

25. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the system of Mantha and Ganger to include a recursive caching of embedded web pages as in Stinson.

26. The motivation for doing so is taught by Stinson on Page 625, first paragraph, namely that caching the web pages allows the user to view the content without waiting for a slow download.

27. It is noted that the claimed limitation is for recursively parsing and caching “**embedded** Web pages”. Stinson discloses caching **hyperlinked** Web pages. It is also noted that Page 8, lines 24-30 of the instant application discuss embedding and hyper-linking as separate operations. However, during the downloading process of IE, all “embedded” objects are downloaded.

28. Also, it is noted that in the base HTML code, there is no difference between embedded and hyperlinked objects. For example, to embed a picture or other object in a web page, the actual data of the picture is not embedded in the page; the embedding is done by means of a link:

```

```

To insert a hyperlink to a web page, again the actual data of the linked object is not inserted, but a link is used:

```
<a href="html/page2.htm">Page 2</a>
```

In neither case is the actual data of the object inserted in the web page; a 'pointer' is used instead. The browser reads the links and displays the data for the image and a hyperlink for the web page.

29. However, even assuming, *arguendo*, the distinction between hyper-linking and embedding, one of ordinary skill in the art would still be motivated to combine the references. This is because, for both embedded objects and hyperlinked objects, the reason for downloading and caching is the same. As recognized on page 625 of Stinson and by the Applicant, the caching of the objects allows for quick retrieval of the Web objects. A person of ordinary skill in the art, having seen IE's capability for recursively caching hyperlinked web pages, would be motivated for the same reason to recursively cache embedded web pages. Both hyperlinked and embedded web pages take time to load; caching them will decrease the wait time and increase the responsiveness of the system.

30. Therefore, it would have been obvious to combine Stinson with the system of Mantha and Ganger, for the benefit of increased responsiveness and lower latency, to obtain the invention as specified in claim 64.

31. **As for claim 77, Mantha discloses** a storage system for Web objects comprising:

- a microprocessor (see figure 3: element 204);
- a storage device coupled to the microprocessor, the storage device adapted to store Web objects and storage routines (see figure 3: element 220); and

- a storage routine stored on the storage device (see column 14: lines 48-67); the storage routine adapted to
  - receive a Web page (displaying a base HTML document on a browser of a Web client);
  - identify Web objects having correlated retrieval times to the Web page (identifying an embedded object associated with each hypertext reference in the base HTML document);
  - receive the Web objects (retrieving copies of the embedded objects from the server; see abstract and summary of the invention).
  - identify a reference to at least one of the Web objects of the Web page (identifying an embedded object associated with each hypertext reference in the base HTML document; see abstract and summary of the invention);
  - store the Web page in a holding area (caching a Web page in a proxy cache; see figure 3: element 227, column 6: lines 40-67, column 7: lines 1-67, and column 8: lines 1-14);
  - receive the at least one of the Web objects (retrieving a copy of the embedded object from the server; see abstract and summary of the invention);
  - store the at least one of the Web objects in the holding area (caching a Web object in a proxy cache; see figure 3: element 227, column 6: lines 40-67, column 7: lines 1-67, and column 8: lines 1-14); wherein

- at least one of the Web objects comprise an embedded Web page (a hypertext reference in the base HTML document; see abstract and summary of the invention). and
32. However, Mantha does not clearly disclose that the storage routine is adapted to
- store the Web page and the correlated Web objects in co-located positions on a storage device.
33. **Ganger teaches** a method of storing objects having correlated retrieval times in co-located positions on a disk drive (see figure 1; page 1: Abstract; and page 3: lines 32-52 of column 1 of Ganger).
34. It would have been obvious to one having an ordinary level of skill in the art at the time the invention was made to include, in the method taught by Mantha, a step of storing the Web objects, the Web page, and the Web objects in co-located positions on a storage device. This would have been obvious since Ganger clearly teaches that storing objects having correlated retrieval times in co-located positions on the disk drive reduces disk access time and improves performance (see page 4: lines 53-54 of column 2; page 5: columns 1-2; page 6: lines 1-15 of column 1; and page 11: 14-22 of Ganger).
35. **Ganger and Mantha also do not expressly teach:**
- recursively parsing the embedded Web page to identify additional embedded Web pages; and
  - storing the Web page, the embedded Web page, and the additional embedded Web pages in co-located positions on the storage device.

36. Stinson discloses a feature of Microsoft's Internet Explorer (IE), namely the "Subscription Wizard". Stinson discloses that IE allows a user to download, or cache, web pages to which the user has subscribed. Specifically, on page 628, the last 2 paragraphs, Stinson notes that IE will not only cache the requested page, but will download and cache pages which are embedded in the page via hyperlinks several levels deep. For example, if a user tells IE to cache "2 links deep", IE will follow all hyperlinks embedded on the present page, cache those pages, and follow each link on each of those embedded pages to cache a third level of pages. This has been a feature of IE in every version since version 4.01. See the illustration below.

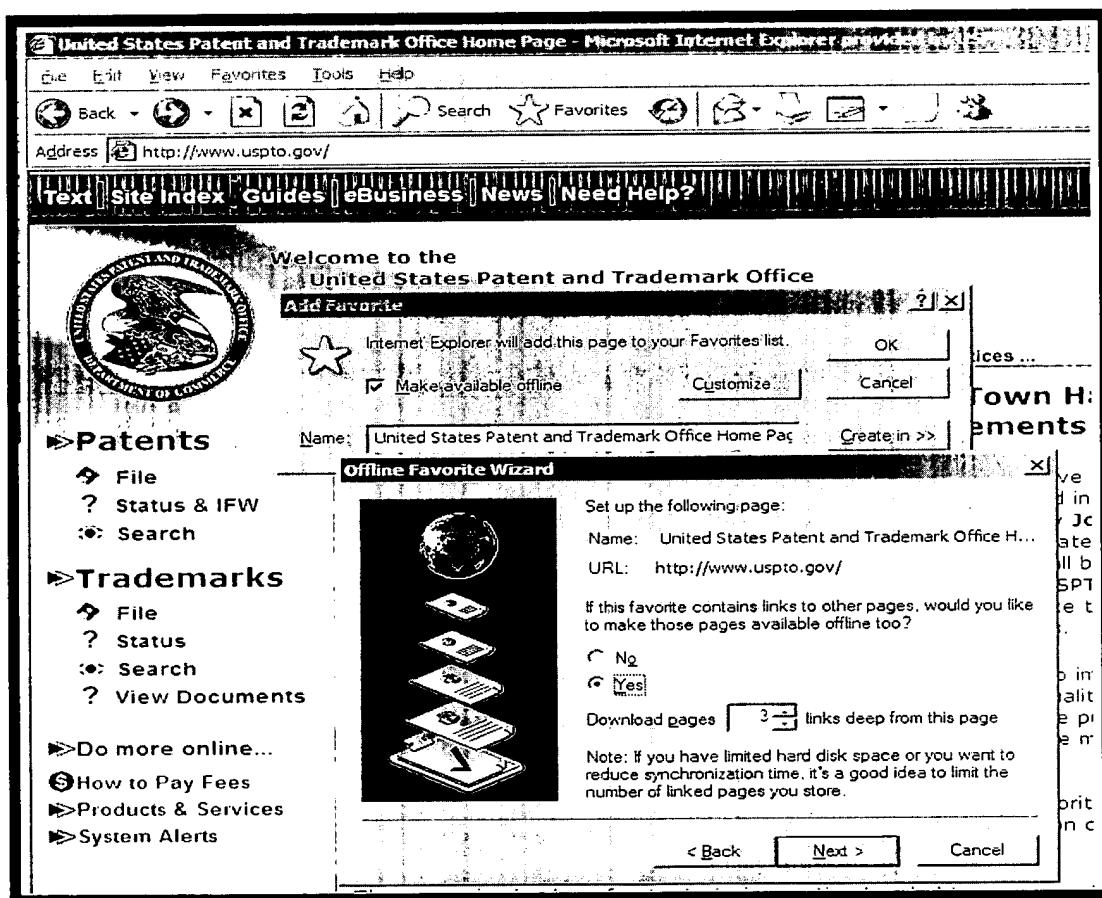


Figure 3 - Microsoft IE's embedded web page caching system

37. Stinson and the system of Mantha and Ganger are analogous art because they are from the same problem solving area, namely web caching for faster access.

38. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the system of Mantha and Ganger to include a recursive caching of embedded web pages as in Stinson.

39. The motivation for doing so is taught by Stinson on Page 625, first paragraph, namely that caching the web pages allows the user to view the content without waiting for a slow download.

40. It is noted that the claimed limitation is for recursively parsing and caching “**embedded** Web pages”. Stinson discloses caching **hyperlinked** Web pages. It is also noted that Page 8, lines 24-30 of the instant application discuss embedding and hyper-linking as separate operations. However, during the downloading process of IE, all “embedded” objects are downloaded.

41. Also, it is noted that in the base HTML code, there is no difference between embedded and hyperlinked objects. For example, to embed a picture or other object in a web page, the actual data of the picture is not embedded in the page; the embedding is done by means of a link:

```

```

To insert a hyperlink to a web page, again the actual data of the linked object is not inserted, but a link is used:

```
<a href="html/page2.htm">Page 2</a>
```

In neither case is the actual data of the object inserted in the web page; a 'pointer' is used instead. The browser reads the links and displays the data for the image and a hyperlink for the web page.

42. However, even assuming, *arguendo*, the distinction between hyper-linking and embedding, one of ordinary skill in the art would still be motivated to combine the references. This is because, for both embedded objects and hyperlinked objects, the reason for downloading and caching is the same. As recognized on page 625 of Stinson and by the Applicant, the caching of the objects allows for quick retrieval of the Web objects. A person of ordinary skill in the art, having seen IE's capability for recursively caching hyperlinked web pages, would be motivated for the same reason to recursively cache embedded web pages. Both hyperlinked and embedded web pages take time to load; caching them will decrease the wait time and increase the responsiveness of the system.

43. Therefore, it would have been obvious to combine Stinson with the system of Mantha and Ganger, for the benefit of increased responsiveness and lower latency, to obtain the invention as specified in claim 77.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse Diller whose telephone number is (571) 272-4173. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JD

DONALD SPARKS  
SUPERVISORY PATENT EXAMINER